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BULBS FOR SPRING PLANTING

a catalog of



Amaryllis, Crinums, Clivias, Iris, Gladiolus, Callas, Fancy Leaved
Caladiums, Tuberous Begonias, and many other rare and fine bulbs

SPRING 1939

CECIL HOUDYSHE

1412 Third St.

La Verne, California

DON'T GET A CASH REGISTER WHERE YOUR HEART SHOULD BE

A Personal Letter—to you

Dear Friends:

I wonder how many of us properly value those things that cost little or even no money but require, principally, effort or response on our own part to have them. Probable no one appreciates them enough, and others very little if any.

About a prized possession we often say—I would not take \$50 for that, when it actually has no market value. That is partly because most of us know the value of money and our vocabulary lacks adjectives.

But there is a type of person who really has little use for any value that cannot be represented by a \$ sign. Let us not be like that, nor even develop in that direction. Let us not put a "Cash register where our heart should be."

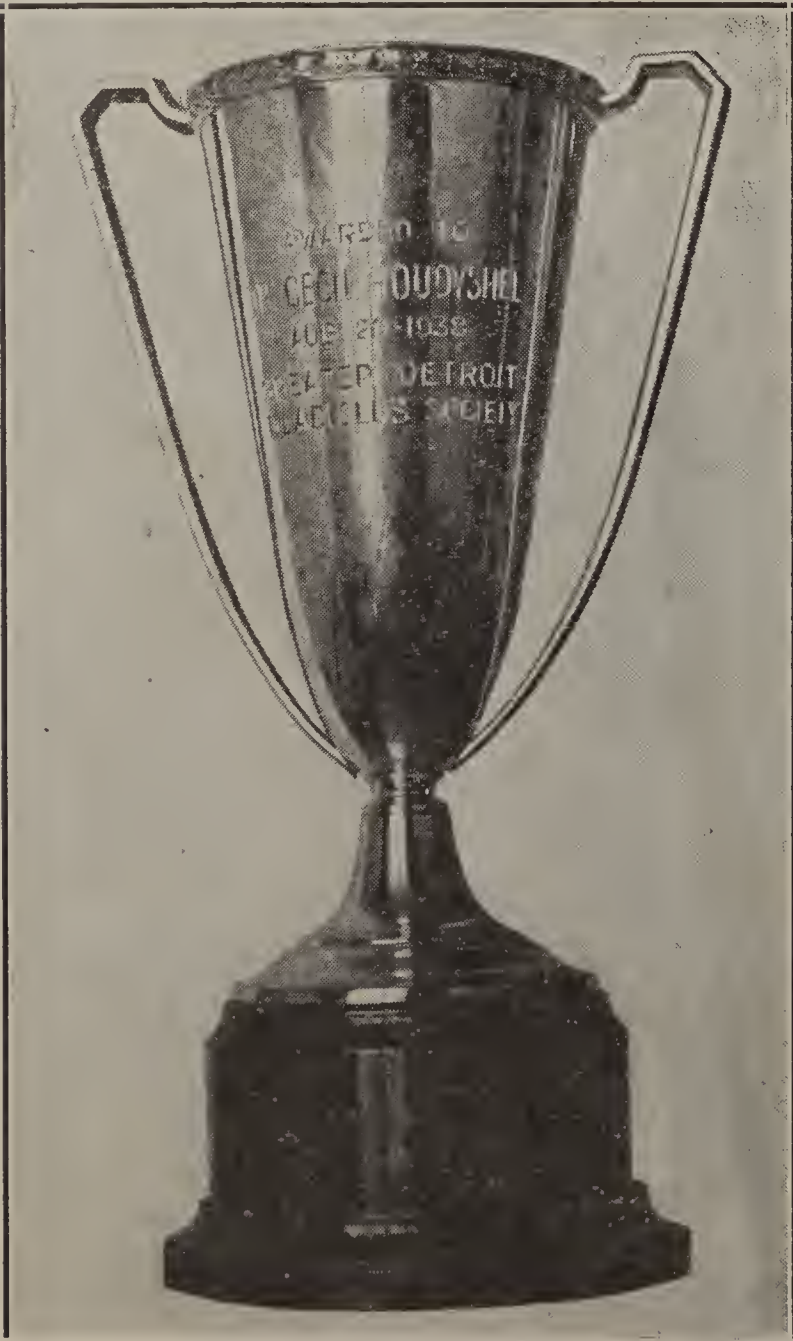
Though money can be useful in acquiring or holding them, some of the best things cannot be bought. Just imagine a shopper calling for \$1.00 worth of Love and Laughter; or 50c worth of True Friendship and an equal value of Honor and Fidelity; from another merchant, Faith in God and Man and Mother Love is demanded; somewhere else the Pleasures of Home, Children, Domestic Felicity.

Finally, our imaginary shopper lays in a supply of the Grace, Color and Perfume of Flowers, the Beauty of Shrubs and the Grandeur of Trees, Vistas of Mountains, Deserts, Prairies, Sea Shores and Ocean Waves and the Sky Lines of Cities, paying in coin.

We all know these things cannot be bought with money. We all know how to acquire them to some extent at least. My purpose is only to remind you and myself what things are worth most to us, and to caution us not to adopt the wrong set of values.

One of the most valuable possessions, seldom fully appreciated until lost, is Good Health. I would be remiss if I did not relate my own experience. I have told you before but repetition emphasizes. By the knowledge gained in reading "Intestinal Gardening" I have regained a greater degree of health than in any other way. The book may be had for \$1.00 from the Health Education Society, Dept. H, 530 S. Alexandria, Los Angeles, California.

Many of life's finer things are gained thru contact with the soil. Growing beautiful flowers and having them to enjoy or to give to others is but one phase of it. One of the leading exponents of this natural desire of man, soil contact, is Madison Cooper of



Calcium, N. Y. He edits and publishes Madison Cooper's Gardening, a magazine of information about flowers and their culture and the philosophy of man's natural life. Send him \$1.00 for a year's subscription and tell him I sent you. He is one of, if not the best Garden Magazine Editors in America.

Last fall, soon after our catalog had been sent out, and announcement made that I had received the Herbert Medal, I was informed that I had received the Hellerich Cup from the Greater Detroit Gladiolus Society.

This is a beautiful silver cup standing 13" high with the base. On one side it is inscribed "Awarded to Cecil Houdyshel, Aug. 20, 1938. Greater Detroit Gladiolus Society."



On the other side is this inscription, "Hellerich Trophy. For Amaryllis Culture. 1938.

I want to make grateful acknowledgment to the Greater Detroit Gladiolus Society and to Mr. Edward F. Hellerich of Mt. Clemens, Mich., the donor of the Cup, for their kindness and for the honor.

Wishing you all a Happy New Year, 12 months long.

Sincerely,

Cecil Houdyshel

INSTRUCTIONS FOR ORDERING, ETC.

Sales Tax. California customers must add 3% to cover state tax. Compulsory, no choice.

If you are a **new customer** this catalog acknowledges your order. We ship bulbs promptly. At the right planting time. Nearly all bulbs are ready to send out now, with the exceptions as stated under catalog descriptions.

Order early. Certain bulbs do not keep long out of the ground. To be safe, and to get the best bulbs order early. Best to plant early, too. Of course, better late than never.

Remit with order, by check or M. O. Currency is acceptable if it gets here. Only rarely is it stolen from envelope. We prefer **no stamps** but if not convenient to remit another way we accept stamps only when \$1.06 worth are sent for \$1.00. We accept C.O.D. orders reluctantly as it adds 25c or more to your expense. Loose coins are not safe and a silver 50c piece requires 6c postage. Please prepay.

Postage prepaid. When you compare prices of our bulbs remember that we pay all the postage on orders of \$1.00 or more. Many dealers ship them charges collect. **On orders under \$1.00** send 10c extra, and don't forget it, please.

Insurance if wanted for 5c extra.

Wholesale. We sell wholesale to dealers only. If in California send your Retail Sales permit No. Establish the fact you are a dealer. Dealers, please send a list of wants and we will quote. We have no wholesale catalog or list, though we grow large stocks of Pink Callas, Clivias and most items listed.

We issue a Spring Catalog about Jan. 15, Fall Catalog about August 15, and Iris Price List about May. The last is sent only to those who request it yearly. The Spring and Fall Catalogs go to all customers.

Every enthusiastic gardener is looking for information. Visit your public library and ask for books on bulbs, etc. Look up varieties in Hortus or Bailey's Cyclopedia of Horticulture for culture methods, etc. I will advise that you subscribe for any or all of the following magazines.

Flower Grower, Dept. H, Albany, N. Y.

Sunset, Dept. H, San Francisco, Calif.

Madison Cooper's Gardening, Dept. H, Calcium, N. Y.

Southland Homes and Gardens, a section of Los Angeles Sunday Times.

YOUR FLOWER FRIENDS

will appreciate learning about this catalog, and we will appreciate their orders. We need each other. We send catalogs only to those who request them. Tell them to drop us a card.

Names are dropped if you do not buy bulbs for three years. If you do not intend to buy it is a much appreciated favor if you will return this catalog to your P. O. and ask it to be returned at our expense. We probably waste a few hundred dollars that we need, every year, in sending them to persons who are not interested.

Print your name and address or write very carefully. We get many we cannot read.

In case of **error** or misunderstanding about your order notify us at once.

Prices. When the price of one bulb only is given the price of a dozen is ten times that and the price of 100 is 70 times the price of one. Half dozen is sold at dozen rate but not less than 100 at the 100 rate. The 1000 rate is 9 times the 100 rate unless otherwise indicated. No less than 1000 at these rates.

EXCHANGING

We need Sternbergias and all rare bulbs. If you have a surplus or any rarity write us. For many bulbs we allow the wholesale price only, but full retail value for rarities. Make arrangements and state what you want in value before sending any bulbs. So many sent us bulbs recently that we fear we lost track of some. That is because those who send bulbs do not send a definite order at the same time. We can't do a lot of corresponding about exchanges. If you do not get your bulbs write and explain fully. State exactly what to send.

WRITING LETTERS

Many write letters of inquiry that are fully answered in our catalog. Much to our regret it is impossible to write all the letters expected. We want to help as many as we can but try the catalog and other sources first. If they fail, then we want you to ask us.

But we love to get your letters. Reading them does not take so much time and energy as writing them. We write to you all twice a year in our "Personal Letter—to you."

GENERAL CULTURE DIRECTIONS

Many amateur gardeners are much concerned about the depth and the distance apart to plant bulbs.

In the average case that depends on the size of bulb. Usually bulbs may be planted two or three times their diameter apart. Thus 2" bulbs are set 4" from edge to edge. Most bulbs 1½" in diameter or more may be planted 4" to 5" deep.

In cold countries bulbs that remain in the ground over winter may be planted somewhat deeper and ground mulched in fall.

Small bulbs like *Zephyranthes* and *Ranunculus* need more shallow planting, 1" to 3" depth. Exceptions to the general rule are noted in this catalog in culture directions.

Soil. Rich sandy loam is the best garden soil. But heavier soils are very good when much humus has been incorporated. In heavy soils the drainage may be poor and in that case they will be much improved by spading to a depth of two feet or even more. In the lower foot of soil include lots of leaves and finely broken sticks preferably half rotted. In the top soil thoroughly incorporate old well rotted barnyard manure (but not much poultry manure) or leaf mold. Peat is also good but some American peat is full of alkali so use imported. Soil containing 25% to 40% humus will not likely have too much.

Turn all manure, leaves, weeds etc. under long enough before planting to allow them to rot.

Fertilizers. Nature puts into the soil the elements needed. Usually the discrete use of fertilizers improve on nature. But beware. Chemical fertilizers are dangerous. Nearly all leave a harmful alkaline residue. Superphosphate does not. We use a handful to 3 or 4 feet of row but it is good only for acid loving plants. In using any fertilizer, Blood, Tankage, Superphos etc. experiment first with a very little on a few plants. If tips of leaves turn brown you have crippled the plant. Bone meal is good for many bulbs and can be mixed with soil before planting or scattered in furrows, before planting or during any period of growth. Use handful to 3 ft.

The best fertilizer is well rotted manure. Manure having odor of ammonia (an alkali) may destroy some plants. A top dressing around *Crinum*s or *Hippeastrum*s and some others when growing vigorously usually stimulates more vigor. Experiment on one first. Thoroughly rotted manure is best. Do not use even this on *Iris* except experimentally.

Peat is useful to mix liberally with soil for acid loving plants.

Mulch or top dressing of rotted manure, leaf mold or peat is very good and lessens labor of cultivating.

Potting. Be sure drainage is perfect. Place piece of broken pot over hole. Over that some small gravel. Soil may be $\frac{1}{3}$ leaf mold or peat; $\frac{1}{3}$ fine sifted sand; $\frac{1}{3}$ rich garden loam. Use peat for acid loving plants. For bulbs or plants needing a neutral soil add a little ground limestone and less peat or none. Pot may be 3 or 4 times diam. of bulb. Small pots result in crowding the roots and forcing bloom. Large pots favor growth and increase of bulbs. When first potted see that soil is moist. Place in dark or shade. Darkness encourages root growth. It is very important that roots are well started for a bulb to make good flowers. Light encourages top growth. If this is made without roots the bulb suffers and gives an inferior flower. Bring to full light gradually only when growth is well started. Give little water until growing well. Some bulbs rot if given much water before they are rooted and growing. Some are contrary and may not bloom if you try to hurry them. A flower bud may precede or accompany leaves.

ARRANGEMENT OF CATALOG

Most catalogs are arranged alphabetically. Some are arranged to fit (more or less) the space allowed by the illustrations. A perfect alphabetic arrangement makes it very easy to find any desired item but does not allow the most logical grouping of plants.

Recently we have been working toward a grouping of bulbs offered according to the Orders or Families to which they belong. In an approximate manner we also try to place together the genera more closely related. Thus under the *Iridaceae*, *Iris* and *Morea* are close relatives and *Gladioli*, *Watsonias*, *Montbretias*, *Ixias* etc. are close. This grouping according to botanical relationship will be found useful in many ways.

Another important item about this catalog is that complete culture directions is included herein for every bulb listed. Sometimes this information

is given for a group, sometimes for the individual bulb.

We do not send out culture information with the bulbs. It is here in the catalog.

Illustrations, are not given because the great expense would add too much to the cost of this catalog and therefore the prices. A beautifully illustrated catalog certainly helps to sell but often leads to future disappointment. We are often told that we make up for lack of illustrations.

Bulb List for Spring 1939

AMARYLLIDACEAE

The Amaryllis family includes a very large proportion of our finest bulbs. Besides those listed below it includes Narcissus or Daffodils which are included in our fall catalogs.

THE AMERICAN AMARYLLIS SOCIETY is one of the most active of plant specialty groups. It is international, members all over the world. They are succeeding in promoting the popularity of Amaryllids by giving several shows each year in various parts of U. S. and by publishing each year a book "Herbertia," beautifully illustrated and full of information about species, culture methods, etc. The 1938 edition contains 218 pages rich in illustrations and information. Each member receives it free until edition is exhausted. If preferred you may have 1939 book which will be published next fall. The present edition will be soon exhausted so join early. Send me \$2.00 for membership, or \$4.00 for 1938 and 1939 books. I am not an official but I like to sponsor the applications of my friends.

HOW TO GROW AMARYLLIS

In the south, from California to Florida most Amaryllids are hardy and are usually grown in the garden. But even here we enjoy potted plants and some Amaryllids, especially Hippeastrums and Clivias, are ideal for the purpose.

In colder sections, only a few of the Amaryllids listed here are hardy and these are noted with the description. But most of them do well in pots. Several of them can be lifted in the fall and stored like Glads. So the northern gardens need not lack the beauty of this plant family.

Bulbs that may be lifted in late fall and stored includes most **Crinums**, all **Ismenes**, and probably all **Zephyranthes**.

It is better to leave them growing in the garden as late in fall as possible and dig as soon as the first frosts kill the foliage. Some advise to preserve the large fleshy roots and protect these over winter by heeling in dry sand. Bulbs should be dry before storing. In the south leave them in the ground permanently, only lifting to divide when they become too crowded.

In the north they may be planted outside very early as they need a long season and moderate frost will not hurt most of them. Mulch the ground to prevent possible freezing.

In potting Amaryllids, observe directions for potting given elsewhere in this catalog.

A few have found difficulty in getting flowers from **Hippeastrums** (or **Amaryllis**) after the first year. That is wholly the fault of incorrect handling as they are most dependable if treated right. Encourage luxuriant growth thru entire growing season. In the fall, from September to November reduce amount of water. Let them become so dry that leaves dry up. A rest of 3 or even 4 months will make them ready to go when they have the chance. Bulbs left in pots will usually show a bud when ready to grow. Be sure soil is neutral. If not add a little ground limestone. Give them a sunny window in early spring. After flowering and when weather is quite warm outside they may be lifted with ball of soil undisturbed and planted outside in partial shade (about 65% sun).

Clivias must have full shade. We grow ours in a lath house with laths

touching when built or in full shade of trees. The slanting early morning sun may not hurt them (or it may hurt some hybrids). It is not needed. The species *miniata* will endure a little sunlight morning or evening or a slight sprinkle in mid-day. *Clivia* foliage is a rich dark green as they contain much of the green coloring matter that absorbs sunlight and helps "digest" the carbon dioxide of the air, the principal plant food. Having so much chlorophyll they need no direct sun but do need light.

In the south where temperature does not go below 28° in winter *Clivias* are quite hardy out doors. They may be planted anywhere in full shade. They will stand a little lower temperature for a short time. In our 1937 freeze when our cold lasted nearly two weeks and minimum temperature of 20° was reached three times we saved our *Clivias* by covering the plants with boxes, bulb trays, papers, etc. Foliage was badly damaged, some completely lost, but almost every one recovered full foliage the following season and most of them bloomed.

Clivias like a rich soil. When fully established outside the ground can be heavily mulched with rotted manure and even leaves help. The soil must be well drained. An underlying stratum of gravel or sand or planting on a slope will furnish that. They like a fairly heavy but porous soil. Mix in plenty of humus and a little sand with the heavy soil. Spade deep and it is a good plan to place an 8" compact layer of sticks, gladiolus tops or chips, etc. two feet under the surface.

In potting *Clivias* give a large plant at least an 8" pot up to 12" or even more. Be sure drainage is "simply perfect." Give them a cool room in winter, 40° to 60° is about right. In February 70° will help bring the flowers.

When flowering and later when in good growth *Clivias* respond to the use of liquid manure, which should not be too strong for any plant.

The only insect enemy of *Clivias* is the mealy bug, a white bug apparently covered with cotton at base of leaves or above. They are easily controlled by using the sprays recommended by local seed and feed stores. Pyrethrum-rothenone sprays are preferred, next oil sprays. Use in a fly-sprayer.

Crinums, Zephyranthes and some others are hardy around Washington, D. C. *Crinum capense*, *Lycoris squamigera* (or *Amaryllis Halli*) are quite hardy in Ohio and Indiana. Every year we buy 100 or more *Amaryllis Halli* from Mrs. Buckingham of Indiana. *Lycorus incarnata* also makes leaf growth in the spring and should be equally hardy. These should be planted at least 6" deep and top mulched in winter. The *Crinum* may be planted deeper. Bulbs must not freeze. *Crinum Cecil Houdyshel* has proven hardy as far north as Wichita, Kansas. Probably hardy to northern Ohio if planted 12" deep and heavily mulched. *C. moorei* is equally hardy, probably others.

Other culture information if needed is added to description of species.

Agapanthus umbellatus, the Blue Lily of the Nile. The name means "love-flower" and is suitable for the many flowered, large umbels of blue flowers.

The plants are large and have a large rootstock instead of bulb. They are quite hardy in the South, but in the North should be grown in buckets or tubs, which may be wintered almost dry in light warm cellar or basement. They flower most all summer. They prefer partial shade in the garden but full sun in the house. 50c.

Amaryllis belladonna. The Belladonna Lily, Lady Godiva Lily, Naked Lady Lily or Surprise Lily is common in southern gardens and is of exquisite beauty and spicy, intriguing fragrance. It is equally valued as a cut flower or in the garden. The common names are descriptive of its beauty and the habit of flowering before they are clothed with foliage. The flowers are in umbels. The variety **major** is a luscious pink thruout. It blooms in August if watered in late July. The **minor** is later and usually has a light throat. Some variations in color occur.

Culture. In the south, plant the bulbs with top a little below the surface. Transplant about July 1, when bulbs become crowded and heave out of ground. They are semi-hardy and the foliage is little hurt by freezing. Even when

the temperature falls to 20°, the foliage recovers and the succeeding crop of flowers is normal. In the colder sections deeper planting, favorable location and protection is necessary. With these precautions it is said to flower at Washington, D. C. and Philadelphia, even in colder climates, though it would be better to grow in a cold frame or cover with brush, or better still in a 12" tub which can be removed to a sunny basement or a conservatory. Frankly, pot culture is not too promising for this beautiful subject but you will get flowers at least the first year from your bulbs and they will be well worth the cost. They will long live in your memory. Please report your results.

Delivery—about June, or as soon as bulbs become dormant, and until fall.

Amaryllis belladonna major. 25c.

A. belladonna minor. 35c.

A. belladonna minor. Deep pink, almost red variety. \$1.00.

Amarcrinum Howardii. An intergeneric hybrid between *Crinum moorei* and *Amaryllis belladonna*. \$2.50 and \$3.50.

Chlidanthus fragrans is a fine bulb for gardens in the South. The foliage dies with the first heavy frost but grows luxuriantly in the summer and increases so fast that it may not bloom until a clump is established. Then in the spring the beautiful yellow flowers with their rich, spicy perfume rewards your patience. In the North the bulbs can be dug and stored over winter or grown in pots that are plunged in the soil and removed to cellar over winter. 15c.

Clivias, like orchids are everywhere considered aristocrats and have until recently been almost equally rare and expensive. We are now however able to offer them at a very reasonable price and their very easy culture makes them available to all. But they will never be "cheap" in any sense. They multiply slowly. Seedlings do not bloom until 5 to 7 years old. A plant will always be a prized possession and not too common.

The flowers are borne in large clusters or umbels in very early spring, usually March or April. There are various orange tones ranging from pink to red. Some are very light, others very dark, but always a masterpiece of creation. Individual flowers are 2 to 4 in. wide, up to 20 or more with several open at one time. Flowers last a long time on the plants.

The plant itself is fully as decorative as a palm when not flowering. The shining leaves are thick, leathery and strap-shaped. The general appearance resembles that of a luxurious *Amaryllis* with many very dark green leaves.

We ship *Clivias* loose rooted which is an innovation. By that method we are able to prepay the postage and save you considerable money.

Unless requested we ship as soon as we can after your order is received because most people get nervous if the plants do not come promptly. But here is a better way. If requested we will hold the order until plants show buds and then ship. In that way you are sure of a flower. When moved a few weeks earlier there is a chance the flower development may be stopped. State your preference when ordering.

Clivia miniata. The hardiest and most valuable species. Flowers are yellow orange and quite attractive. Our strain is an improvement on the wild species. While these are not equal to the best hybrids they are very desirable. We are offering them at a low special price again but will not be able to continue it indefinitely. Small plants 50c and 75c each. Blooming size, \$1.00. Large \$1.50. Extra large \$2.00. We cannot guarantee \$1.00 size to bloom the first year tho they usually do.

C. miniata hybrids. These hybrids do not have as broad foliage, with bluntly rounded tips as the *Nobilis* hybrids. The colors are lighter pastel tones and many prefer them to the darker colors. The size is about the same. They are hardier and more easily grown. The flowers are more wide open and flat. We have not quite decided which type of the hybrids we prefer but are inclined to favor these more delicate colors. Large, \$5.00.

C. nobilis hybrids. Flowers range from light to dark orange red. Higher because we have fewer. \$10 to \$15 each.

C. Zimmerman hybrids. This is claimed by the originator to be the best strain and is certainly the best American strain. They are the best we have ever seen anywhere. They show more of the Miniata traits in the more pointed leaves and the delicate flower colors than do the European hybrids. Small plants, 2 years old or more \$1.00 each. Larger, from 4" pots, \$1.50 each. We can ship the latter in the pots, by express, at your expense if you request it. It is worth the added cost. Or will ship loose rooted, prepaid. When received shift to 6" or larger pots.

Important. Our Clivia hybrids are not marked as to color, size of flower etc. We cannot furnish a specified color before blooming. If desired we will mark one and ship while in bloom. This adds to our expense, requires a larger package, etc., hence we add \$2.50 to prices of all hybrids.

Guarantee. If you get a Clivia hybrid that you do not like, or consider of inferior quality return it and we will send another. Send us enough to pay postage on another plant. Returned plants must be undamaged. Return within one year.

Cooperias are closely allied to Zephyranthes and may be handled the same way. *C. pedunculata* makes a 2" bulb with a long neck and should be planted about 4" deep. In the colder climates they should be dug and stored in the fall like Zephyranthes or Gladiolus but in the south they may be left in ground. If planted 6" to 8" deep they would no doubt be hardy in Southern Ohio, etc. They are natives of a dry climate. Their lovely white flowers are a conspicuous feature of the landscape after every shower in some parts of Texas.

Cooperia pedunculata. 25c.

Crinums should be freely used in all southern gardens. They are especially valuable in landscaping around trees and among shrubs. Most of the bulbs are very large weighing even up to 6 lbs. or more tho the average is under 2 lbs.

The flowers of most species are lily shaped. In fact many refer to them as "Crinum Lilies," tho the flowers are borne in umbels like all Amaryllids. They combine beauty with the rich tropical appearance of the plant and some fragrance.

Altho very large for pots they can be so grown but we do not advise them for general pot use, but rather for the specialist. In the north dig and winter roots in dry soil in buckets in the basement or dry like glads. Northern gardens could have them by this method and an even easier method is plausible. We have known equally tender plants to be carried over safely in the garden by a protecting heap of brush, twigs and leaves. "Lay it on, thick." You can place a thin layer of earth on first for extra precaution. While some Crinums bloom only once a season many will bloom several times if dried a little then watered liberally.

We have probably grown more Crinum hybrids than anyone else. We have introduced three of these, of which Cecil Houdyshel is widely popular. Others are coming on.

Crinum Americanum. This was sent here from Mississippi and is no doubt a form of this species tho not the one that grows so abundantly in south eastern swamps. That variety does not succeed in this dry climate. This one does. The lovely white flowers are tinted pink and have narrow, long petals. Bulb increases rapidly by stolons. Give plenty water. \$1.00.

Crinum asiaticum. A grand tropical appearing plant up to 6 ft. if grown in slight shade. Does well tho in full sun. Huge umbels of large, pure white flowers, with very long, narrow petals like a Spider Lily and stiff, erect leaves. A good winter bloomer with some flowers in summer. Bulbs grow to immense size, weighing several pounds, thus adding to our mailing expense. Smallest blooming size, \$2.50, Medium \$3.50. Largest, \$4.50.

Crinum capense alba. White, resembles an Easter Lily. Hardy. 50c.

C. capense rosea. Pink. 60c ea.

C. Cecil Houdyshel. This our first Crinum origination, was a selection from 600 seedlings of Capense X Moorei cross made about 1913. It is now grown all over the world and is considered one of the best hybrid Crinums. Flowers are a deep rose pink, but not the deepest color as originally described. It is the most profuse bloomer of all Crinums producing as many as seven flower stems in one year. We have flowers on it in practically every month except when unusually cold or hot. (We will admit the weather in California is sometimes unusual,—but we really do have typical California weather,—once in a while.)

This Crinum is an unusually sturdy grower of large size. A friend in Penn. grew one in a bucket in her kitchen and it crowded her out of the kitchen and she had to cook in the pantry. Bulbs will reach a diameter of 8" or more. Best of all it can be grown in the north and has been found hardy in Kansas. We want our friends to try it and report. In the north plant deep enough to escape frost,—about 12". In the fall protect with a mound of leaves and brush.

Award of Merit from American Amaryllis Society.

\$1.50 each. Smaller \$1.00.

C. Ellen Bosanquet. A gorgeous new hybrid, wine-rose flowers. One of the loveliest hybrids and most unique in color. No garden should be without it. \$1.50.

C. Gordon Wayne. Our 1938 introduction. A seedling of Virginia Lee and thus a third generation hybrid, the first ever produced. Flowers large pure white in late season and sometimes in a mild winter.

Like Virginia Lee and Moorei it must have considerable shade especially in mid-summer as foliage burns in much sun. Even in shade the season of growth and full foliage for Gordon Wayne and Virginia Lee appears to be in the cooler weather of spring and fall and thru the winter if there is no heavy frost.

It is much more robust, rapid in growth and in multiplying than Virginia Lee and foliage is broader, more luxuriant. A beautiful plant in flower or out, when in full foliage. Price \$10 each.

C. J. C. Harvey. Beautiful pure soft pink flowers. \$1.00.

C. kirkii. White, with red stripe thru center of petals. As a great many flowers are open at one time in the huge umbel they are gorgeous. 75c.

C. Louis Bousanquet. Delicate pink flowers and a free bloomer. \$1.00.

C. moorei. Large pink, bell-shaped, flowers in the fall, freely produced. The long neck of the bulb surmounted by broad leaves give the plant great decorative value. Requires shade. 50c. Extra large, 75c.

C. podophyllum. A very pretty small plant that grows well in semi-shade, and multiplies very rapidly. Flowers said to be pure white and very nice but apparently not a free bloomer. \$1.00.

C. powelli alba. Very fine pure white. One of the most valuable and beautiful of Crinums. 50c. Extra large, 75c.

C. Virginia Lee. We introduced this in 1934 and sold many for \$10.00 each. It is a seedling of Cecil Houdyshel X J. C. Harvey and the first Crinum hybrid ever produced by crossing two other hybrids. It is also the first Crinum hybrid that crosses readily and produces seed freely. It is therefore a great advance in Crinum improvement.

Like Gordon Wayne it has the habit here of going dormant in mid summer and of growing all the rest of the year unless prevented by hard frosts. Give it the same culture, shade, etc. as Gordon Wayne and Moorei.

Flowers are large rose pink with white throat. Price \$4.00.

Cyrtanthus are closely related to **Zephyranthes** but very different in habit and appearance. They are tropical bulbs and evergreen usually. Being rare, they are little known, though easy to grow in the garden in warmer sections of the South or in pots elsewhere. If left undisturbed a few years they make

fine clumps. Bloom is most abundant in spring or all winter if weather is mild. You will love their dainty flowers.

Cyrtanthus lutescens. Bright yellow tubular flowers, two inches long. Useful for cutting as are all *Cyrtanthus*. 50c.

C. mackenii. Clear ivory white flowers and a rather stronger plant. 50c.

Elisena longipetala. A very rare amaryllid from Peru. The bulb and plant closely resemble the *Ismene*, (*Hymenocallis calathina*) and the culture is the same. The flowers are much prettier than the common *Ismene*, being pure white with long graceful petals. Since it can be dug in fall and stored it can be grown anywhere but as it likes a long season we suggest starting in pots. Our price is low considering rarity. \$7.50.

Eucharis grandiflora. Truly named for the flower is grand. They are pure, waxy white with a central corona after the fashion of the *Narcissus* and *Hymenocallis*. *Eucharis* are bulbs from Brazil and extremely rare in this country. They are usually grown in greenhouses but were formerly common in cans and pots on front porches in south Florida. The conditions of growth are shade and a warm, humid atmosphere.

The usual blooming period is spring, but by partly drying off a little after flowering it is said they can be brought into flower as often as three or four times in a year.

They should be pot bound for best blooming. Pot in a soil containing well decayed compost, peat and ground limestone, or bone meal.

Our experience and the reports of customers convince us they are very difficult to flower. We have had a few only in our unheated greenhouse.

Price, bulbs with foliage and bare roots \$1.50 post paid. If wanted in pots we will send by express at your expense for \$1.75.

Hippeastrums are commonly called "Amaryllis" and often so listed in catalogs. For a long time the botanists have called the genus *Hippeastrums*, tho probably Linneus, father of modern botany, included them in the genus *Amaryllis*. A recent authority places them back there and this may prevail. That means *Amaryllis belladonna* must go to botanical court and have her generic name changed unless she is matrimonially allied with another genus. **Callicore** is suggested for the new name. At least this **Beautiful Lady** can get some calico out of that to make herself a dress and then no one can call her a **Naked Lady**.

But Linneus also included *Sprekelia*, *Sternbergia* etc. under *Amaryllis*. The Genus had to be broken up.

Hippeastrums or *Amaryllis* are the most gorgeous of bulbs for winter blooming in pots or for the outside garden. Colors run from pure white to variously marked tones of pink and red. We offer only the colors listed below. In the assorted you will find near white, rose, carmine, garnet, ruby, scarlet etc. Some have a spicy fragrance.

Culture. Pot the bulbs as soon as received. Use a rich porous loam containing plenty of humus. Screened, very old rotted manure is the best humus. Ground limestone or bone meal may be added. Especially needed if soil is slightly acid. Be sure of perfect drainage. Set the bulb half above the surface of soil in pots, just cover in outside garden. Potted bulbs should be in moist soil when set out given little water until a bud appears. Set in a moderately warm room, in shade. When bud appears (which may be between January and March) water freely and bring into full light. During period of blooming and active growth water liberally and give some weak liquid manure. They can use a little Vigoro, ground sheep manure, or bone meal. When growth seems to be completed, which should happen about September or October, gradually dry them off. It does not hurt if leaves mostly die. Some let them dry completely, some don't. For Christmas flowers force as much early growth as possible and give an early rest. After a three month rest they are usually ready to start.

Hippeastrum, assorted American Hybrids. All colors, mixed and include

many reds. Don't ask for certain colors in this lot. 50c each. \$5.00 per doz.

H. White Hybrids. These have the species "solandriflorum" in ancestry, and have a very spicy fragrance. Some are nearly white but usually lightly marked with pink. But the effect is white. \$1.00 each. \$10.00 per doz.

H. equestre. A lovely salmon pink. Give it poor sandy soil, no fertilizer. This encourages flowers instead of foliage and bulb increase. 35c ea. \$3.50 doz.

H. johnsonii. The oldest hybrid, still a favorite. It does best of any for outdoor planting in the south. Equally desirable in pots. Rich red with white stripe in center of petals. 50c ea. \$5.00 doz.

H. Red Hybrids. We bought these and have grown them one year. Flowers are neither extra large nor extra fine. Extra fine reds cost up to \$10.00. Price \$1.00.

H. Sibyl Houdyshel. White with a narrow border of pink. Throat blotch of pink and some light feathering of the same color in petals. The general effect is of a white flower lightly marked pink. A thrifty grower and multiplier.

We are obliged to modify our price according to size of our stock. Price, each \$4.00. Per doz. \$45.00. No wholesale discounts.

H. advenum, Ox-blood Lily. This is quite different from the above *Hippeastrums* hence not included in alphabetic order. It belongs to the subgenus *Habranthus*. This is usually listed as *Habranthus miniatus*.

The ox-blood red flowers are small, in an umbel of 6 to 8 or more and appear in the fall. It is a winter grower. The foliage stands at least 20° temperature without injury so it may be planted well up in the middle south. The long neck requires it be planted 6" deep. Give full sun. Delivery in June. 25c ea. \$2.00 doz.

H. advenum. Pink form. 35c ea. \$3.50 doz.

Habranthus robustus. Formerly listed as a *Zephyranthes*. Large, lilac pink flowers that are useful for cutting. The summer foliage persists into the winter when warm. 15c ea. \$1.50 doz.

Habranthus texanus. Usually listed as a *Zephyranthes*. Very small plant and bulb. Deep yellow flowers, coppery outside, in fall before foliage appears, Texas native, hardy much farther north. Plant 2" deep, or more farther north. June delivery. 15c ea. \$1.25 doz.

Hymenocallis. Spider Lilies and Ismene. This genus contains some of the most beautiful of the *Amaryllids*. Few except the *Ismene* are seen commonly in gardens. Their exquisite white, dainty beauty makes this fact regrettable.

Culture. The *Ismene* and some of the *Spider Lilies* can be handled by the "Gladiolus method," dug in the fall after tops die (or are killed by frost) and stored in a frost free cellar. Dry the bulbs well. As they like a long season plant as early as possible or in the north start in pots and shift to garden when warm. In the south it is probably better to leave in the ground tho we dig ours usually.

Hymenocallis calathina. The *Ismene* or Peruvian Daffodil is an old favorite. Large white flowers flushed and veined green with large cup in center. Very fragrant. Specially priced as we have a large stock. Large, 25c. M. 15c. S. 10c.

The next five are very rare *Ismene* hybrids, more beautiful and very free flowering. No wholesale discounts.

Hymenocallis calathina Advance. Grows two feet high. Very large pure white flowers, green stripes in throat. A great improvement and much more free flowering. \$5.00.

H. festalis is a *H. calathina* X *Elisena longipetala*, hybrid. Magnificent pure white large flowers. \$6.00.

H. festalis Triumph. Very large, elegant, snow white flowers. A great improvement on *Festalis*. \$7.50.

H. Olympic. Parentage unknown to me but probably from Sulphur Queen or Amancaes. The largest Ismene. Large primrose-yellow flowers, green stripes and throat. \$10.00.

H. Sulphur Queen. *H. calathina* X *H. amancaes* hybrid. A primrose yellow Ismene. \$2.00 each.

H. caribaea. An easily handled large Spider Lily. Hardy as far north as N. Carolina and no doubt could be easily grown in northern states as the hardy *Amaryllis Halli* if planted deep below the frost, and mulched. 75c.

H. galvestonensis. Claimed to be hardy in north and very likely is if planted deep. We had over 1000 collected for us in Texas. Planted over a year ago. They have done nothing here so far. Either transplanting stops them a long time or this Texan does not like California. Leaves appear but make little growth. Bulbs appear sound and have rooted. Priced reasonably so that you can experiment and report. In Texas they go as deep as 12". 50c.

H. Harrisiana. A small easily grown Spider Lily that is a dependable bloomer and can be dug and stored. \$1.50.

H. species 1. A dwarf Spider Lily that thrives in the north when dug and stored in fall but not a free bloomer by that method. In milder sections try deep permanent planting. Very pretty. 20c.

H. species 2. One of the large species that is evergreen unless cut by frost. The large white flowers are produced freely in many flowered umbels and are exquisite. Will do well anywhere in mild climates and would probably succeed in N. Carolina and Washington, D. C. \$1.50.

Hypoxis leptocarpa. Star Grass. Grass-like leaves, yellow flowers. Not showy but interesting to collectors. 25c.

Leucojum vernum. Quite hardy everywhere. Very early, blooming in north before snow is gone. Dainty white flowers, petals tipped with dot of green. Plant 4" to 6" deep. 10c ea. 50c doz.

Lycoris. Fall blooming *Amaryllids*. Hardy well up into middle south. Those making winter foliage do not lose it at 20° temperature. Two species *squamigera* and *incarnata* do not make foliage until early spring and if planted 6" deep and mulched are hardy. We buy many bulbs of *squamigera* in Indiana.

Delivery of all species in June.

Lycoris aurea. Golden Spider Lily. Very rare and one of nature's most gorgeous flowers. Deep gold. Plant 5" deep. Prefer sandy soil. \$2.00.

L. incarnata. Flesh colored flowers with reddish lines. \$2.50.

L. radiata. Red Spider Lily. Formerly known in U. S. as *Nerine sarniensis*, but not that. Gorgeous red, spidery flowers. Easy culture and hardy to N. Carolina. Special 20c ea. 4 for 50c. 9 for \$1.00.

L. squamigera. The famous hardy *Amaryllis Halli*. The flower umbel without foliage resembles *Amaryllis belladonna*. Color, lilac to pink. Plant 6" deep and mulch in the north. Every northern garden should have them. \$1.00 ea. \$10.00 doz.

Nerine filifolia. The smallest *Nerine*. Evergreen foliage with dainty pink flowers in the fall. Moved any time of year. Hardy only in south, does not stand 20°. All *Nerines* do well in pots. 25c ea., 5 for \$1.00. \$2.00 doz.

Nerine, assorted hybrids. Very lovely varieties are included. Summer delivery. \$1.00 ea.

Pancratium maritimum. Has sweetly fragrant white flowers like the Ismene but smaller and has no green in throat. 25c ea. Per doz. \$2.50.

Polianthes tuberosa, called universally just "tuberose," is a favorite of northern as well as southern gardens. The tall spikes of waxy white flowers have the heaviest, sweetest perfume in the garden. A few think it too heavy for the house but we like a few of them in a bouquet or better still, alone in a vase.

The bulbs should not be subjected to cold even near 32° either in the ground or in storage. The flower bud if chilled may refuse to develop though

the bulb will grow. Therefore plant when corn and dahlias are planted and dig before heavy frosts.

Polianthes tuberosa, var. **Double Pearl**. Large bulbs, 15c. Per doz. \$1.00.

P. tuberosa, var. **Mexican Everblooming**. Green leaves. 15c ea. Per doz. \$1.00.

P. tuberosa, var. **Mexican Everblooming**. Variegated foliage. 15c ea. Per doz. \$1.00.

Mixed varieties, per doz. 85c.

Sprekelia formosissima is not merely beautiful, it is gorgeous. The deep bright red flowers have long narrow petals in an odd irregular form that gives distinction. They bloom later than *Hippeastrums* and the culture is identical except they like deeper planting. They also flower more often out of the regular season. They do well in pots or garden and can be dug and stored in the fall. Each 25c. Per doz. \$2.50. Extra large, each 40c, per doz. \$4.00.

Sternbergia lutea is a small, yellow flowering, winter growing *Amaryllid*. It is often called "Fall Crocus." Culture like others of this type. Plant 3" deep. Delivery in June. Each 25c. Per dozen. \$2.00.

Zephyranthes, or Fairy Lilies, are well named both ways as they are the smallest bulbs in the *Amaryllis* family. But they are not too small for garden use. The plants are from 6" to a foot high. They are fine for border plants.

Several species of *Zephyranthes* are natives of Texas. Most of them can be wintered in the garden as far north as Kentucky if well mulched.

That is not the limit of their northern range of usefulness in the garden, however, as they can be planted very early, dug in the fall before the ground freezes much and stored dry over winter like Glads. They are even grown commercially in the north.

They multiply rapidly by offsets and seeds; you can soon have a good bed.

The range of color and time of blooming should make one want them all.

They like an acid soil and abundance of moisture at all times. The soil acidity can be increased by incorporating fine leaf mould, or peat. For immediate effect when bulbs do not do so well, (which never seems to happen with any species here listed,) aluminum sulphate may be used, a teaspoonful to a square foot.

Zephyranthes ajax. Very fine yellow flowered species. 15c.

Z. candida. Best white. Blooms from mid-summer on, every time it is watered here. Foliage evergreen. 10c ea. Per doz. 50c. Per 100 \$3.00.

Z. citrina. The best yellow. Rare. 25c ea.

Z. grandiflora. Often listed as *carinata* or *rosea*. The largest species. Large pink flowers, late. Can be dug and stored. 10c ea. \$1.00 per doz.

(For *Z. texana* and *Z. robusta* see *Habranthus*).

IRIDACEAE

The Iris Family includes *Gladiolus*, *Iris*, *Morea* and others that are listed in our fall catalogs.

GLADIOLUS

The popularity of Glads that waned when thrips became prevalent has been largely regained. They are almost and possibly quite the most important flower for floral use. Many bulbs are now planted in private gardens and soon all those who love them or learn to love them will learn the successful methods now followed.

The Renaissance of the *Gladiolus* is now well established.

Culture. Glads that are planted between November 15 and March 1 in Southern California (later in No. California and in the east) will bloom in the cooler months and escape the damage by thrips. They do not usually attack in damaging numbers until the weather is quite warm in late spring or early summer.

But good flowers may be had in the warmer weather also and with precautions that are easy. If thrips appear do all your watering with sprinklers. In fact we advise that the furrow method be discarded. If the water falls over them like rain for at least a half hour or more every day it is, "Good bye, Mr. Thrips. I am glad I didn't see you." So sprinkle in early spring too, and not let them get started.

A grower in one of our hottest sections surprised Los Angeles florists by bringing in quantities of good Glads in August. He had never been troubled with thrips and did not know why. Our questions developed the fact that he irrigated with the Skinner overhead pipes. On account of the extreme heat it was his custom to turn on the water, after first cutting open flowers, and sprinkle all thru the hottest part of the day, and every day. His flowers brought \$1.00 per doz. wholesale.

We advise sprinkling in late afternoon or evening to avoid injury to flowers. Use any kind of a sprinkler, even a hose directed by hand.

Don't plant thrips when you plant Glads. Treat them by soaking 5 or 6 hours in a solution of 1 oz. powdered corrosive sublimate to 8 gal. of water. Use crock or wooden container but no metal in contact with solution. Dissolve powder in 1 gal. boiling water and add cold. Our bulbs are treated before sending out and need no more.

Plant Glads 4" deep in double rows in one furrow. Very small bulbs 3" deep. Place them twice their diameter apart. If you can afford it, a liberal amount of peat mixed with soil loosens the soil and gives the mild acidity they like. Good home made or collected leaf mold is as good. Mulch surface with the same. Use no manure that is any where near fresh. Beware ammonia odor. Ammonia is an alkali. Superphosphate, a handful to 3 feet of row is acid and very good. Do all this and keep Glads growing 2 months or more after blooming and you will dig big fat bulbs. Dig and store every year. Thrips do not injure the bulb. Burn old foliage if you have a thrips.

Explanation. In this list and thruout this catalog L. means large; M., medium; S., small. In Glads L. is #1 and #2, 1 1/4" up. M. is #3 and #4, 3/4" to 1 1/4". S. is #5 and #6, less than 3/4" diameter. Prices are for one bulb. Unless otherwise stated a dozen costs ten times the price of one bulb. Positively not less than 6 bulbs of one sort will be sold at dozen rate. One hundred bulbs, all one kind, are sold at 70 times the price of one bulb. Any quantity under 100 takes the dozen rate.

Californians, don't forget Sales Tax.

Aflame. Giant begonia rose. Early, fine. L. 6c.

Albatross. Best pure white. Large. 6c.

Bagdad. Fine, smoky old rose. A beauty, L. 6c. M. 30c doz. S. 20c. doz.

Betty Co-Ed. Soft creamy pink. A small prim, fine for cutting. L. 5c ea. Per 100 \$2.50. M. 25c doz. S. 15c doz.

Betty Nuthall. Orange pink, yellow throat. Early. L. 5c ea. Per 100 \$2.25. M. 25c doz. S. 15c doz.

Bill Sowden. Large deep red. L. 6c.

Com. Koehl. Immense scarlet. L. 7c.

Dr. F. E. Bennett. Flame red. Almost the most satisfactory red. L. 5c. \$2.75 per 100. M. 30c doz. S. 20c doz.

Dr. Moody. Large lavender. Similar to Minuet but no light throat. L. 6c.

Golden Dream. Best tall deep yellow. L. 6c.

La Paloma. Early, vivid orange. L. 5c. M. 35c doz.

Libelle. Heliotrope blue. The most lovely blue. L. 7c.

Los Angeles. Orange toned pink. Most profuse bloomer and best winter grower. More grown for cutting than any other except Picardy. One large bulb has produced 12 spikes for cutting. If planted close or if too dry the flowers are poor. Give double space in planting, more water and be surprised. L. 5c. 100 for \$2.25. M. 25c doz. 100 for \$1.25. S. 15c doz. 100 for 85c. S. size will bloom.

Marmora. Immense smoky lavender. L. 7c.

Minuet. Still the best lavender. L. 6c.
Mrs. Konynenburg. Best deep blue. L. 5c.
Pelegrina. Deep violet blue. Very early, strong grower. L. 5c. 100 for \$2.50. M. 30c doz. 100 for \$1.75. S. 20c doz. 100 for \$1.25.
Pfitzer's Triumph. Immense salmon red. L. 6c.
Picardy. Large shrimp pink. Voted the world's most popular glad. It is the best. L. 5c. 100 for \$2.50. M. 30c doz. 100 for \$1.50. S. 15c doz. 100 for 85c. All sizes bloom.
Purple Glory. Large ruffled dark red. L. 5c.
Radiant Orange. New true orange. L. 7c.
Red Lory. Lovely rose red. L. 6c.
Rose Marie Pfitzer. Deeply ruffled, creamy white, suffused pink. Very beautiful. L. 15c.
Ruffled Gold. Name describes it. L. 10c.
Virginia. Still the sweetest rose red. L. 5c.
Wasaga. Glowing apricot. L. 6c.
Mixed. No guarantee as to what is contained, usually several kinds but may be only a few. L. 45c doz. 100 for \$2.25.

IRIS

Tall Bearded Iris. Formerly called German Iris and Flags. Named for the Goddess of the Rainbow because of their rich colors. These belong to the large genus Iris in the order Iridaceae.

Ordinarily we think of Iris as blooming only in the spring. Please note two varieties listed below that are almost perpetual bloomers in mild weather. They quit blooming only in coldest winter weather (it is seldom that cold here) or in mid-summer heat.

The following are offered as specials. Our complete long list is offered in our Iris Price List which is issued in May or June as they are usually transplanted just after blooming. This Price List is sent when issued only to those who request it on a post-card.

Culture. Iris may be grown in any soil but very sandy soil is not quite as good as the heavier. Do not use any manure. Plant in full sun. Cover rhizome only one inch. Iris may be transplanted at any time of year. Let them rest in late summer for best flowering.

Cecil Houdyshel. Tall lavender plicata. 25c ea. \$2.00 doz.

Bobby Houdyshel. Dwarf phlox pink plicata. 10 ea. \$1.00 per doz.

Eleanor Brooks. Like Bobby Houdyshel but taller, and has more yellow in throat and a deeper tone of phlox pink. 25c.

Everblooming Plicata. Our seedling not yet named but offered for trial. Please report on it. Standards heavily flushed Saccardo's Violet. Falls, white bordered and veined in throat with violet. Plicata type. Not a large flower. Stems 15" to 20". Pretty. Nearly always in bloom. \$2.50.

Golden Cataract. A pure deep golden yellow. Here it blooms the year around except when very hot in mid-summer or when winter is very cold. No other Iris except our Everblooming Plicata approaches it in profusion of flowers. We want everyone to have this gorgeous new Iris. Therefore we reduce the price again. \$1.00 each. \$9 doz.

Iris Collections. 35 unnamed seedling Iris, \$1.00. Ten excellent, modern Iris for \$1.00 including Bobby H., Cecil H., Eleanor Brooks and 7 more of our selection. 20 varieties good Iris, \$1.00. Last two are all labeled.

Tigridia. The Mexican Shell Flower. Many shades of yellow, orange, pink and red, spotted and very striking and beautiful. Plant in the spring in semi-shade, about 2 in. or 3 in. deep. Dig and store in the fall. Stored bulbs must not dry out too much. Bulbs do not keep late in spring so order as early as possible. 15c. ea. Ten for \$1.00.

ARACEAE. (ARUMS, CALLAS, ETC.)

This family contains the so-called Calla Lilies or Zantedeschias, Fancy Leaf Caladiums and other Aroids offered in our fall catalog.

Culture. Callas for house culture should be potted at once. Use a 5" of 6" pot and cover bulbs about 1". Use soil containing plenty of peat or leaf mold as they need an acid soil. Place pot in deep shade until they start then give them a sunny window. They bloom early. After blooming and as soon as the weather is warm, all frost danger past, they may be shifted to the garden. Or they may be planted very early in the garden. In California plant at once and up to about April 1. Give full sun along coast, light shade in mid-day is good in hot, sunny climates. The liberal use of peat advised. They are semi-aquatic and need to be constantly wet to succeed. Dig and store colored callas in the south as well as north tho they usually live over winter in the ground here. **White Callas** will grow continuously if kept wet, but that way they seldom bloom. When they quit blooming let them grow a while then withhold water entirely. Give them a good rest, completely dry, but do not remove from the soil.

Zantedeschia aethiopica, var. Baby Calla. This is the smallest and whitest Calla. Small enough for corsage. L. 35c; small 25c.

Z. aethiopica, var. Godfrey Calla. The best and most popular of dwarf Callas before "Baby" was introduced. Being twice as large as Baby makes it a "medium" size. This is so much more appropriate in size, freer in blooming and more desirable every way that we do not recommend the large type. 20c and 30c.

Z. Albo-maculata. The prettiest foliage of all and worth growing for that alone. Special. Small bulbs that may not bloom first year but I think they will with good culture—10c. Large 15c and 20c.

Z. elliotiana. Pure golden yellow flowers. 15c to 25c, all blooming size.

Z. rehmanni. The famous pink Calla. Colors vary from pink to rose red. The plant and flowers are small, growing only to about 12". 50c, 75c and extra large for \$1.00 The larger sizes bloom more surely for amateurs.

Amorphophallus rivieri. Large plant up to 4 ft., very decorative and tropical in appearance. Flower often 3 ft. long, rich chocolate dotted with red. Carrion odor. Bulbs do not bloom until very large. In the south plant outside in semi-shade, 3" to 5" deep. In the north they are grown in large pots. Only very large bulbs bloom and these not guaranteed for first year. S. \$1. each. Sizes at \$2., \$3. to L. \$4.

Arum palaestinum. Black Calla or Solomon's Lily. This must not be planted earlier than August 1 and preferably not before September 15. Bulbs ready for delivery in June. Plant and flowers look like Callas but flower is really black. Flower has no bad odor. Successful in pots in north and quite hardy outside in south and middle south. They prefer part shade. S. 25c. Small blooming size, 35c. L. 75c. Jumbo \$1.00. Give the Jumbo size a 10" pot.

Fancy Leaved Caladiums. Assorted colors. The flowers are inconspicuous but the leaves are as richly colored and gorgeous as a whole bouquet of flowers. Our bed of these last summer attracted unusual attention. It was a gorgeous riot of color.

Culture. Our first attempt at growing these 25 years ago failed and we considered them unsuited to our hot dry climate. But we now grow them to perfection, and understanding them, it is very easy. Every sub-tropical garden can have them. We will tell you how.

The soil should be very rich sandy loam with a very large amount of old rotted manure thoroughly mixed—not lumpy. Then add some leaf mold and perhaps peat. This last because they like an acid soil. Leaf mold from beneath oak trees is the most acid. Bone meal is recommended but is not essential. They are such gross feeders that we have laid forkfuls of nearly fresh dairy manure around them but not touching. Manure should be added as a mulch

after they are well up and growing. Later additions give the constant supply of food they need.

Another essential is this. They are almost aquatic. They must be kept wet. They like humid air so we plant with trees, shrubs and other plants around them to protect them from hot dry wind; water daily.

They start very slowly but if temperature is 70° and up they are very sure. Here where the growing season is long it is better to start directly in the garden as they make finer plants. Cover about 3". They must not be too wet before they come up. Don't plant until weather is mild. They luxuriate in heat, moisture and rich soil.

They may be sprouted in moist moss before planting. In the north it is advisable to start early in pots.

Special prices. Assorted fine colors 1" up, 25c ea. \$2.50 doz.

LILACEAE

The Lily Family contains the *Liliums* or true lilies, *Gloriosas* and many others a few of which we catalog in the fall only.

Liliums. They should be planted in the fall but several species do well if planted very early in spring. It is best to plant before March 1 here. We will not have bulbs much later than that. Plant large bulbs about 5" deep, smaller accordingly. Deep well drained loam is best soil. Rich soil containing much humus is fine but apply no manure unless well rotted and spaded in at least 6 months before planting. Entirely surrounding the bulb with a layer of sand is good. The following may be planted in full sun or half shade. The ideal situation is for ground to be shaded as by shrubs or leafy mulch with tops in full sun. They like to keep their feet cool and their heads warm. These are hardy bulbs and should never be dug except to replant soon.

Lilium elegans, var. Best Red. 20c ea. 3 for 50c. Large 35c ea.

L. regale. Large, fragrant, white flowers suffused pink with creamy throat. Very hardy and easy. 15c ea. 4 for 50c. Large 25c. ea.

Gloriosas, or climbing lilies are little known and extremely rare. Their great beauty and easy culture entitle them to a place in your garden. Tho the flower is much like a lily and the plant resembles one they grow from tubers instead of bulbs.

Culture. They prefer a deep, well drained, sandy soil or at least a sandy loam tho they will grow in heavier soils. Plant 6" deep, full sun or part shade. Plant very early, preferably before April 1. In the north, start in pots about Mar. 15. Ours will not be available until Feb. 15. These are 5" (or more) one-arm tubers.

Gloriosa rothschildiana. Gorgeous crimson flowers on a two foot stem. 50c.

G. superba. Much taller and branches and rebranches, thus continuing the blooming period for over two months. Under favorable conditions and with a trellis to support it, the plant will go to 12 ft. Starts later. The narrow twisted segments of the flower opens greenish yellow with outer half dull red. As the flower develops the yellow clears, the red brightens and later the entire flower becomes red. While **superba** is not as gorgeous as **rothschildiana** it is lovely, producing many more flowers that have character, strikingly unlike any other. 75c.

Milla biflora. This new introduction from Mexico belongs to Lily family but is quite different from the true Lilies. Called in Mexico Estrellitas or Little Stars. Two to seven showy white waxy flowers, two inches across, on a stem 12 to 18 in. tall. A faint green stripe runs thru center of each petal on outside. Very attractive for cutting or in garden. Bloom from July to September. Plant as early as possible in Spring. In cold climates they must be dug and stored over winter. Easy culture. Special price 20c each. \$1.75 per dozen.

Galtonia candicans. Here is another fine bulb belonging to the Lily family though only slightly resembling the genus *Lilium*. Often called Summer Hyacinth. The 4 ft. strong erect stem carries a raceme of 20 or more large, pure white, bell-shaped flowers. Very effective in groups. Culture very easy. In cold climates they must be dug in fall and stored. Plant very early. 15c ea. Per doz. \$1.50.

BEGONIACEAE

Tuberous Rooted Begonias. We always grow a few of these but list them only now and then. There is always a demand for the dry tubers, so we yield to this demand and offer a very fine strain of double flowering varieties.

Culture. They may be grown in pots or in the garden in about 65% shade. They like a cool moist situation.

The soil should be composed principally of humus. The best soil would be 50% humus or more and the balance fine sand or very sandy loam. The humus should be composed of screened peat or leaf mold for the most part and the rest thoroughly rotted, screened manure. By screened we mean made very fine. In pots the soil will be improved by the addition of a handful of ground charcoal or a little soot, and charcoal improves those in the garden as well. During their growing period they may be stimulated by watering frequently with cow-manure water and soot diluted in water,—a handful to 2½ gal. water. Plant the bulbs near top of ground 1 ft. apart. Keep the surface constantly moist by daily sprinkling. You must do this or fail.

We offer medium sized bulbs, 1" to 1½" diameter in Crimson, Scarlet, Rose or Pink, White and Yellow or Orange. 25c ea., 3 for 70c., 5 for \$1.00, your own selection of color or colors. Assorted our selection, 6 for \$1.10.

RANUNCULACEAE

Ranunculus and Anemones. Both are standard florists flowers. Easily grown and useful for cutting. They may be had during all the cooler months of the year. They do not bloom well in July and August nor do they start well then but are liable to rot instead. One can get more gorgeous flowers for cutting for a small outlay of money and labor from these small tubers than from any other source.

Anemones are richest in blue and red in shades to white. The flowers are single, semi-double and sometimes quite double. But very double Anemones are undesirable.

Ranunculus. Colors, red, pink, white, yellow but no blue. Very double, in shapes like roses, camellias, begonias or globe shaped.

Culture. The soil should have a very liberal amount of humus in form of peat, leaf mold or very old rotted manure spaded in and thoroughly mixed. Plant 1" deep 3" apart, rows 10" apart.

Note this. We do not grow our own Ranunculus and Anemones. They are grown only in large quantities by about three leading specialists for the entire U. S. Last fall we estimated our need at 250,000 for fall and spring. We sold out in two months. We purchased all the No. 3 available and finally succeeded in getting nearly 200,000 of No. 4 Ranunculus and No. 3 Anemones that were a little smaller than we usually send out.

The grower says they will give equally good flowers and that 90% or more should grow. (They seldom germinate 100%).

He recommends that they be sprouted before planting. Lay a wet burlap sack down in a cool shady place. Spread out bulbs on top and cover with another wet sack. Keep the sacks damp. When tubers sprout, plant them. This is an especially good method for any size Ranunculus, especially advisable for small ones.

Prices Ranunculus, No. 4, assorted colors, and Anemones, No. 3, 10c doz. 50 for 35c. 100 for 65c. 200 for \$1.10. 500 for \$2.50. 1000 for \$4.75.

Anemone, Blue Poppy, all blue flowers, or **His Excellency,** all reds. Large No. 3 tubers, almost No. 2 in size. 25c doz. 50 for 80c. 100 for \$1.50. 1000 for \$13.50.

BULB CATALOG

SPRING 1939

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